

From: [REDACTED]
To: [Clean Cars](#)
Subject: Clean Cars
Date: Friday, 9 August 2019 12:47:24 PM
Attachments: [Equivalent \\$ per litre for EV over ICE, WITH RUC.pdf](#)
[Charge profile and equivalent billing.PNG](#)

Greetings,

I am NOT in favour of the scheme as a current EV owner for the two major reasons listed below.

1. It devalues newer EVs in the hands of current owners who have already made a sacrifice in the interest of lowering NZ's emissions. My EV cost \$75,000 of hard-earned cash just a few months ago and this scheme will devalue that significantly without any consideration. It is the NZ government that "books" the lower emissions, not the owners. My purchase was based on a projection of running costs until 2022 when the RUC exemption is legislated to expire, a not-unreasonable 2.5 year span for planning such a major expense and changing the economics so soon is not appreciated.

2. The loss of the RUC exemption, barely mentioned anywhere in the documentation, will considerably increase running costs for all EV owners, existing and new. It is quite unbelievable how casually such an important incentive has been treated. Let's break this down as to why it's such a big factor:

a) The government (EECA) has apparently used an electricity price for charging of \$0.15/unit. The actual cost of charging according to the open market I would estimate is about \$0.65/unit. Aside from the fact that many parts of NZ can't even get a domestic night rate as low as \$0.15, the domestic price of electricity is the private business between the consumer and the supplier. It is not the government's place to misappropriate savings that the consumer earns by adhering to the supplier's T&Cs, such as exclusivity of supply and only charging at night. You must use open market prices for costing. When was the last time a petrol station asked you to sign a contract and then come back at night to fill up?

b) It is not reasonable to misappropriate and expand on the fact that the early-adopter EV owner demographic mostly charges at home. This discriminates against those who (i) own cheaper, low-range EVs, (ii) those who can't charge at home due to access, and (iii) those who normally drive outside their 'home' range for the same reasons any car driver would.

The economical use of EVs should be open to everyone, and as such there must be a vision encompassing how to accomplish that. The first step is to accept that public charging costs must be the basis for analysis. If you have to "feebate" RUCs, so be it.

c) The government advertises EV running costs as "the equivalent of \$0.30 a litre of petrol" despite knowing full well that the RUC exemption has been legislated for some time to expire in 2022. Do you not consider it remiss to not practice full disclosure to the public as you are fully aware that the quoted equivalent cost per litre is temporary and is not achievable with RUCs included?

d) The table below provides a tool to determine the "equivalent cost per litre of petrol" with RUCs included at the current rate. For simplicity it is calibrated specifically for my own EV's energy consumption at 15.56 kWh/100km, but that is a common rate. Based on a recent price of petrol, marked out is the range of petrol car

economy that will match EV charging costs at home (AC) and on the road (DC FC .25+.25). It is clear that smaller petrol cars may be cheaper to run, depending on the average EV charging cost. Slightly lower servicing costs for EVs are well absorbed several times over by higher insurance costs, in case you are wondering.

e) The second graph measures from my EV the aggregate electricity cost at the very-common "\$0.25/unit + \$0.25/minute" EV public chargers in NZ, in winter. Clearly the cost jumps significantly at higher battery charge levels, to \$0.90/unit at 70% in this case. This characteristic is the normal behaviour for EV batteries - charging is temperature dependant, but per-minute costing effectively discriminates again those who must extract the most range from their battery capacity.

In summary I would encourage a major re-think of the Clean Car proposal and consider pilot programs to gather data rather than impose untested legislation on NZ.

Sincerely,

Paul Axford
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